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- (71) Applicant (for all designated States except US): UNIVERSITY OF UTAH RESEARCH FOUNDATION [US/US]; 615 Arapleen Drive, Suite 110, Salt Lake City, UT 84108 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): CHILINGARIAN, Ashot [AM/AM]; Alikhanyan Brothers 2, #5, 36 Yerevan (AM). SZABO, Aniko [HU/US]; 2192 Rolling Oaks Lane, Layton, UT 84040 (US). JONES, David [US/US]; 1780 E. Logan, Salt Lake City, UT 84108 (US).
- (74) Agents: BOOTH, PAUL M et al.; HELLER EHRMAN WHITE & MCAULIFFE LLP, 1666 K Street, N.W., Suite 300, Washington, DC 20006-1228 (US).
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(54) Title: MULTIVARIATE RANDOM SEARCH METHOD WITH MULTIPLE STARTS AND EARLY STOP FOR IDENTIFICATION OF DIFFERENTIALLY EXPRESSED GENES BASED ON MICROARRAY DATA

(57) Abstract: The present invention provides multivariate methods for analyzing microarray gene expression data of high dimensional space and thereby identifying differentially expressed genes. The methods of this invention provide a random search procedure with multiple starts and early stop. Larger sets of differentially expressed genes may be identified using the methods of this invention starting from feature spaces of smaller dimensionality where accurate estimates on covariance matrix can be made.

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